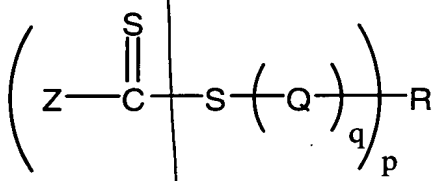
A2

salts, $P(O)Alkyl_2$. For a further list of monomers see Moad and Solomon "The Chemistry of Free Radical Polymerization", Pergamon, London, 1995, pp 162-170.

PLEASE ADD THE FOLLOWING NEW CLAIMS:

11. A process for the synthesis of a block polymer of the general formula:



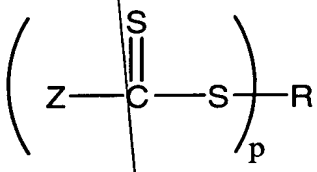
Formula A

A3

comprising contacting:

(i) a monomer having repeating units of Q, and;

(ii) a chain transfer agent:



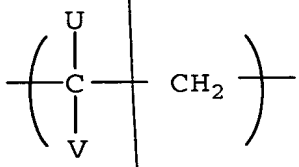
Formula C

having a chain transfer constant greater than about 0.1; and

(iii) free radicals produced from a free radical source;

wherein:

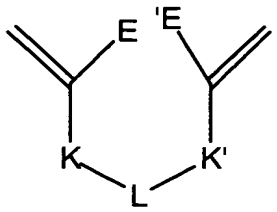
Q is:



wherein;

U is selected from the group consisting of hydrogen, halogen, and optionally substituted C_1-C_4 alkyl wherein the substituents are independently selected from the group that consists of hydroxy, alkoxy, aryloxy (OR"), carboxy, acyloxy, aroyloxy ($O_2CR"$), alkoxy- carbonyl and aryloxy-carbonyl ($CO_2R"$);

V is selected from the group consisting of hydrogen, R" and halogen, provided when Q is styrene or methyl methacrylate, Z is not alkoxy; or Q is of the formula:



A3 B'

where E, E' are independently selected from the group consisting of H, CH_3, CN, CO_2Alkyl, and Ph; K, K' are selected from the group consisting of CH_2, C=O, $Si(CH_3)_2$, and O; L is selected from the group consisting of $C(E)_2$, O, $N(Alkyl)_2$ salts, $P(Alkyl)_2$ salts, and $P(O)Alkyl_2$;

wherein:

Z is optionally substituted alkylthio; optionally substituted alkoxy; dialkyl-or diaryl-phosphonato; or dialkyl-or diaryl- phosphinato;

R is selected from the group consisting of optionally substituted alkyl; optionally substituted alkenyl; optionally substituted alkynyl; an optionally substituted saturated, unsaturated or aromatic carbocyclic or heterocyclic ring; and a polymer chain prepared by any polymerization mechanism; in agent C, R• is a free-radical leaving group that initiates free radical polymerization;

R" is selected from the group consisting of optionally substituted C_1-C_{18} alkyl, C_2-C_{18} alkenyl, aryl, heterocyclyl, aralkyl, alkaryl wherein the substituents are independently selected from the group that consists of epoxy, hydroxy, alkoxy, acyl, acyloxy, carboxy (and salts), sulfonic acid (and salts), alkoxy- or aryloxy-carbonyl, isocyanato, cyano, silyl, halo, and dialkylamino;

q is 1 or an integer greater than 1; and

p is 1.

12. The process according to claim 11, wherein said polymer chain in R is poly(ethylene oxide); R'' is carboxy (and salts) or sulfonic acid (and salts); or wherein L is diallyldimethylammonium chloride.

13. The process according to claim 11, wherein Q is styrene, a functional styrene, butadiene, chloroprene, an acrylate ester, a methacrylate ester or an acrylonitrile.

14. The process according to claim 13, wherein Q is vinyl acetate.

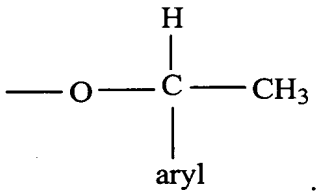
15. The process according to claim 11, wherein R is an alkyl group substituted with substituents selected from the group consisting of aryl, alkenyl, alkynyl and alkyl groups.

16. The process according to claim 11, wherein R is an alkyl group substituted with a substituent selected from the group consisting of aryl, alkenyl and alkynyl groups.

17. The process according to claim 11, wherein R methyl.

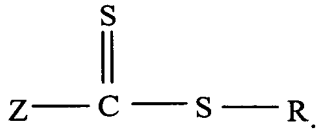
18. The process according to claim 11, wherein Z is optionally substituted alkoxy.

19. The process according to claim 18 wherein said Z is:



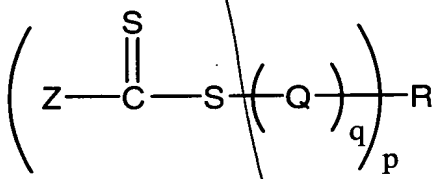
20. The process according to claim 11 wherein Q is styrene, methyl acrylate, ethyl acrylate, butyl acrylate, tert-butyl acrylate, vinyl acetate, or acrylic acid wherein Z is alkoxy and R is optionally substituted alkyl wherein said optional substituents are alkoxycarbonyl and alkyl, or two alkoxycarbonyls.

21. The process according to claim 11, wherein the chain transfer agent is a polymer made by contacting a monomer having the formula CH_2=CUV with free radicals from a free radical source and a compound having the formula:



22. The process according to claim 11 wherein in the chain transfer agent p = 1, R is alkyl and Z is optionally substituted alkoxy, said optional substituents being alkyl and alkoxycarbonyl, or two alkoxycarbonyls.

23. A process for the synthesis of block polymers of the general formula:

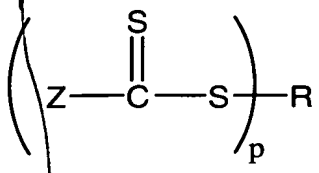


Formula A

comprising contacting:

(i) a monomer having repeating units of Q;

(ii) a chain transfer agent:



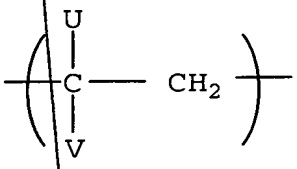
Formula C

having a chain transfer constant greater than about 0.1; and

(iii) free radicals produced from a free radical source;

wherein:

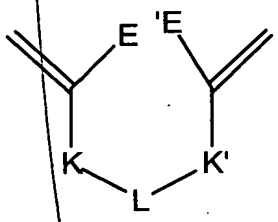
Q is:



wherein;

U is selected from the group consisting of hydrogen, halogen, and optionally substituted C_1-C_4 alkyl wherein the substituents are independently selected from the group that consists of hydroxy, alkoxy, aryloxy (OR"), carboxy, acyloxy, aroyloxy (O_2CR"), alkoxy- carbonyl and aryloxy-carbonyl (CO_2R");

V is selected from the group consisting of hydrogen, R", CO_2H, CO_2R", CN, $CONH_2$, CONHR", CONR"$_2$, O_2CR", OR" and halogen, provided when Q is styrene or methyl methacrylate, Z is not alkoxy ; or Q is of the formula:



where E, E' are independently selected from the group consisting of H, CH_3, CN, CO_2Alkyl, and Ph; K, K' are selected from the group consisting of CH_2, C=O, $Si(CH_3)_2$, and O; L is selected from the group consisting of $C(E)_2$, O, N(Alkyl)$_2$ salts, P(Alkyl)$_2$ salts, and P(O)Alkyl$_2$;

wherein:

Z is optionally substituted alkylthio; optionally substituted alkoxy; dialkyl-or diaryl-phosphonato; or dialkyl-or diaryl- phosphinato;

R is selected from the group consisting of optionally substituted alkyl; optionally substituted alkenyl; optionally substituted alkynyl; an optionally substituted

saturated, unsaturated or aromatic carbocyclic or heterocyclic ring; and a polymer chain prepared by any polymerization mechanism; in agent C, R• is a free-radical leaving group that initiates free radical polymerization;

R" is selected from the group consisting of optionally substituted C_1-C_{18} alkyl, C_2-C_{18} alkenyl, aryl, aralkyl, and alkaryl, C_2-C_{18} alkenyl, aryl, heterocyclyl, aralkyl, alkaryl wherein the substituents are independently selected from the group that consists of epoxy, hydroxy, alkoxy, acyl, acyloxy, carboxy (and salts), sulfonic acid (and salts), alkoxy- or aryloxy-carbonyl, isocyanato, cyano, silyl, halo, and dialkylamino;

p is 1; and

$q \geq 2$ wherein Q is selected from 2 or more different monomer species in which different monomer or group of monomers appears in discrete sequence.

24. The process according to claim 23 comprising increasing the ratio of (ii) to (iii) and obtaining a polymer having a polydispersity in the range of 1.6 to 2.0.

25. The process according to claim 24, wherein the polymer so obtained has a polydispersity of about 1.5.

26. The process according to claim 23, wherein Z is optionally substituted alkoxy.

27. The process according to claim 23, wherein the polymer has at least two polymer blocks of polystyrene/polymethyl acrylate.

28. The process according to claim 11 comprising increasing the ratio of (ii) to (iii) and obtaining a polymer having a polydispersity in the range of 1.6 to 2.0.

29. The process according to claim 28, wherein the polymer so obtained has a polydispersity of about 1.5.

30. The process according to claim 11, wherein Z is optionally substituted alkoxy.

31. The process according to claim 11, wherein the polymer has at least two polymer blocks of polystyrene/polymethyl acrylate.

32. The process according to claim 21 comprising increasing the ratio of (ii) to (iii) and obtaining a polymer having a polydispersity in the range of 1.6 to 2.0.

33. The process according to claim 32, wherein the polymer so obtained has a polydispersity of about 1.5.

34. The process according to claim 21, wherein Z is optionally substituted alkoxy.

35. The process according to claim 21 wherein Z is alkoxy and R is optionally substituted alkyl wherein said optional substituents are alkoxycarbonyl and alkyl, or two alkoxycarbonyls.

36. The process according to claim 21 wherein Q is styrene, methyl acrylate, ethyl acrylate, butyl acrylate, tert-butyl acrylate, vinyl acetate, or acrylic acid wherein Z is alkoxy and R is optionally substituted alkyl wherein said optional substituents are alkoxycarbonyl and alkyl, or two alkoxycarbonyls.

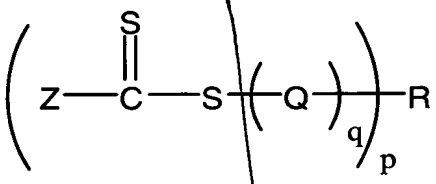
37. The process according to claim 11, wherein substituents in R and Z comprise alkylcarbonyloxy, aryloxycarbonyl, carboxy, acyloxy, cyano, arylalkylcarbonyl, hydroxy, halogen, amino, epoxy, or alkoxy.

38. The process according to claim 23, wherein substituents in R and Z comprise alkylcarbonyloxy, aryloxycarbonyl, carboxy, acyloxy, cyano, arylalkylcarbonyl, hydroxy, halogen, amino, epoxy, or alkoxy.

39. The process according to claim 11, wherein the substituents in R" are independently selected from the group that consists of epoxy, hydroxy, alkoxy, carboxy, sulfonic acid, and halo.

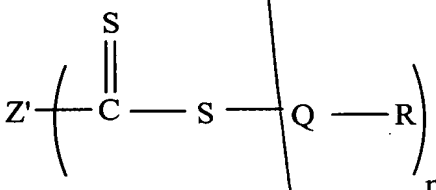
40. The process according to claim 23, wherein the substituents in R" are independently selected from the group that consists of epoxy, hydroxy, alkoxy, carboxy, sulfonic acid, and halo.

41. A process for the synthesis of block polymers of the general formula:



Formula A

and



Formula B

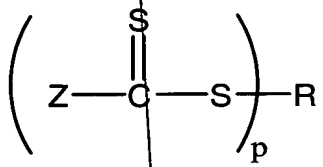
comprising contacting:

(i) a monomer having repeating units of Q selected from the group consisting of vinyl monomers of structure CH_2=CUV, maleic anhydride, N-alkylmaleimide, N-arylmaleimide, dialkyl fumarate and cyclopolymerizable monomers;

(ii) a chain transfer agent having a chain transfer constant greater than about 0.1; and

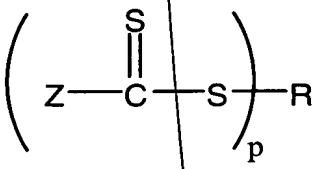
(iii) free radicals produced from a free radical source;

wherein said chain transfer agent is a polymer made by contacting free radicals produced from a free radical source with a monomer of the formula CH_2=CUV and a compound selected from the group consisting of:



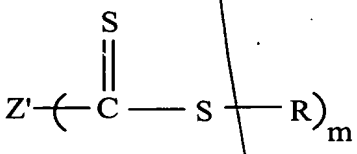
Formula C_1

wherein p = 1,



Formula C_2

wherein p is an integer ≥ 2 and R = R'; and

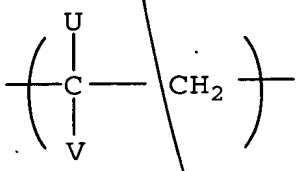


Formula D;

wherein when said polymer is polymerized from said compound of Formula C_1 or C_2, said block polymer is of Formula A; and when said polymer is polymerized from said compound of Formula D, said block polymer is of Formula B;

wherein:

Q is:

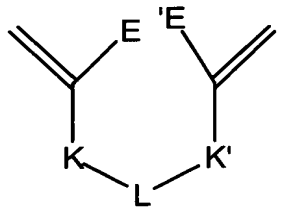


wherein;

U is selected from the group consisting of hydrogen, halogen, and optionally substituted C_1-C_4 alkyl wherein the substituents are independently selected from the

group that consists of hydroxy, alkoxy, aryloxy (OR"), carboxy, acyloxy, aroyloxy (O_2CR"), alkoxy- carbonyl and aryloxy-carbonyl (CO_2R");

V is selected from the group consisting of hydrogen, R", CO_2H, CO_2R", COR", CN, $CONH_2$, CONHR", CONR"$_2$, O_2CR", OR" and halogen, provided when Q is styrene or methyl methacrylate, Z is not alkoxy; or Q is of the formula:



where E, E' are independently selected from the group consisting of H, CH_3, CN, CO_2Alkyl, and Ph; K, K' are selected from the group consisting of CH_2, C=O, $Si(CH_3)_2$, and O; L is selected from the group consisting of $C(E)_2$, O, $N(Alkyl)_2$ salts, $P(Alkyl)_2$ salts, and $P(O)Alkyl_2$;

wherein:

Z is optionally substituted alkoxy; hydrogen; chlorine; optionally substituted alkyl; optionally substituted aryl; optionally substituted heterocyclyl; optionally substituted alkylthio; optionally substituted alkoxycarbonyl; optionally substituted aryloxycarbonyl (-COOR"); carboxy (-COOH); optionally substituted acyloxy (-O_2CR"); optionally substituted carbamoyl (-CONR"$_2$); cyano (-CN); dialkyl- or diaryl- phosphonato [-P(=O)OR"$_2$]; dialkyl- or diaryl-phosphinato [-P(=O)R"$_2$]; or a polymer chain formed by any mechanism;

Z' is a m-valent moiety derived from a member of the group consisting of optionally substituted alkyl, optionally substituted aryl and a polymer chain; where the connecting moieties are selected from the group that consists of aliphatic carbon, aromatic carbon, and sulfur;

R is selected from the group consisting of optionally substituted alkyl; an optionally substituted saturated, unsaturated or aromatic carbocyclic or heterocyclic ring; optionally substituted alkylthio; optionally substituted alkoxy; optionally substituted dialkylamino; an organometallic species; and a polymer chain prepared by any polymerization mechanism; in compounds C and D, R• is a free-radical leaving group that initiates free radical polymerization;

R" is selected from the group consisting of optionally substituted C_1-C_{18} alkyl, C_2-C_{18} alkenyl, aryl, heterocyclyl, aralkyl, alkaryl wherein the substituents are independently selected from the group that consists of epoxy, hydroxy, alkoxy, acyl, acyloxy, carboxy (and salts), sulfonic acid (and salts), alkoxy- or aryloxy-carbonyl, isocyanato, cyano, silyl, halo, and dialkylamino;

R' is a p-valent moiety selected from a member of the group consisting of optionally substituted alkyl, optionally substituted aryl and a polymer chain; where the connecting moieties are selected from the group consisting of aliphatic carbon, aromatic carbon, silicon, and sulfur; in compounds C and D, R• is a free radical leaving group that initiates free radical polymerization; and

wherein m is an integer ≥ 2 and q is 1 or an integer greater than 1.

REMARKS

The specification was amended on line 1, page 1 to provide reference to the priority applications. The specification was also amended on page 8 to correct an inadvertent typographical error.

As indicated above, this amendment is filed in conjunction with the applicants' request under 37 C.F.R. §1.607 seeking to have an interference declared with the '705 patent. The '705 patent matured from Application Serial No. 09/214,880 (hereafter the '880 application) filed on January 14, 1999 under 35 U.S.C. § 371 of PCT/FR98/01316, filed June 23, 1998, (hereafter the '316 application), which takes a priority from French Application No. 97 07764 (filed December 30, 1997, hereafter the '764 application).

The present application filed on January 30, 2001 (Application No. 09/762,833, hereafter the '833 application) is a § 371 application of PCT application No. PCT/US97/12540 (hereafter the '540 application) filed on July 3, 1997, which takes priority from two Australian provisional specifications PO 0933 (hereafter '933 specification) and PO 1109 (hereafter the '109 specification) filed respectively on July 10, 1996 and July 18, 1996.

New claims 11-41 find specific support within the '833 application as detailed in ANNEX I attached hereto. In light of the detailed support for each and every limitation of these claims, the applicants submit that claims 11-41 add no "new matter" to the '833 application and request their entry into the record for the current proceedings. The undersigned has been unable to locate the '933 specification filed